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and is not binding precedent of the Board

Paper No. 25

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte DAVID N. EDWARDS and STEPHEN J. VICIK

Appeal No. 1997-3099
Application 08/191,886

ON BRIEF

Before WINTERS, WILLIAM F. SMITH, and ROBINSON, Administrative Patent Judges.

ROBINSON, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal under 35 U.S.C. § 134 from the final rejection of claims
1 - 6, 9 - 56, and 65 - 73. Claims 57 - 64, the remaining claims pending in the application,
have been withdrawn from consideration by the examiner and are not before us on appeal.

Claims 1 and 65 are illustrative of the subject matter on appeal and read as follows:

1. A multilayer cheese packaging film having a thickness of less than 10 mils and comprising a first outer layer;

a core layer having a thickness of from about 0.05 to less than 0.10 mils comprising a blend of about 20-70 wt.% of nylon 6/66 copolymer and about 30-80 wt.% of an EVOH copolymer having a melting point of about 158°C or lower;

a protective second outer layer; and

first and second adhesive layers;

wherein said core layer is between said first and second adhesive layers with (1) said first adhesive layer being adhered to a first surface of said core layer, said first adhesive layer being located between said first outer layer and said core layer, and (2) said second adhesive layer being adhered to an opposing second surface of said core layer, said second adhesive layer being located between said protective second outer layer and said core layer; and wherein said film is heat shrinkable at 90°C.

65. A process for making a biaxially stretched, heat shrinkable multilayer film having a thin core layer which controls oxygen and carbon dioxide permeability of said film comprising:

coextruding in a tubular form, around a volume of air, melt plastified polymeric resins having a first outer layer, a core layer comprising a blend of from 30-80 wt.% of an EVOH copolymer having an ethylene content of about 38 mole % or higher and from 20-70 wt.% nylon 11 or nylon 6/66 copolymer, a second outer layer, first and second adhesive layers wherein said core layer is between said first and second adhesive layers with (1) said first adhesive layer being directly adhered to a first surface of said core layer, said first adhesive layer being located between said first outer layer and said core layer, and (2) said second adhesive layer being directly adhered to an opposing second surface of said core layer, said second adhesive layer being located between said second outer layer and said core layer to form a primary tube wherein said core layer and said first and second adhesive layers each comprise less than 10% of the total thickness of the primary tube;

cooling and collapsing said primary tube;

reheating said primary tube to an orientation temperature below the predominant melting point for each layer oriented, simultaneously biaxially stretching said primary tube

to form an expanded, biaxially stretched, secondary tube having a continuous core layer less than 0.10 mil in thickness; and rapidly cooling said stretched film to form a heat shrinkable film having a total thickness of from about 1.5 to about 4.0 mils.

The reference relied upon by the examiner is:

Newsome et al. (Newsome)

4,615,922

Oct. 7, 1986

GROUND OF REJECTION

Claims 1 - 6, 9 - 56, and 65 - 73 stand rejected under 35 U.S.C. § 103. As evidence of obviousness, the examiner relies on Newsome.

We reverse.

BACKGROUND

Applicants describe the invention at pages 10-11 of the specification, as being directed to a multilayer film having a high carbon dioxide permeability and relatively low oxygen permeability which is controlled by a thin core layer. The film is stated to be flexible and having at least 5 layers wherein the core layer is about 0.05 to 0.10 mils and is a blend of about 20 - 70 weight percent nylon and 30 - 80 weight percent of an ethylene vinyl alcohol (EVOH) copolymer having an ethylene content of about 38 mole percent or higher. The film is described as being useful for packaging respiring articles such as cheese.

DISCUSSION

The rejection under 35 U.S.C. § 103

In rejecting claims under 35 U.S.C. § 103, the examiner bears the initial burden of presenting a prima facie case of obviousness. In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). Only if that burden is met, does the burden of coming forward with evidence or argument shift to the applicants. (Id.) In order to meet that burden the examiner must provide a reason, based on the prior art, or knowledge generally available in the art as to why it would have been obvious to one of ordinary skill in the art to arrive at the claimed invention. Ashland Oil, Inc. v. Delta Resins & Refractories, Inc., 776 F.2d 281, 297 n.24, 227 USPQ 657, 667 n.24 (Fed. Cir. 1985).

On the record before us, the examiner has relied solely on the patent to Newsome in rejecting the claims on appeal. Newsome describes a multi-layered film of the same make up as the film of the appealed claims. (Rejection, Paper No. 11, pages 3-4). However, the examiner acknowledges that “the essential difference between the claimed invention and cited reference is the thickness of the core layer.” (Rejection, page 6). Each of the independent claims on appeal are directed to a film, a process of preparing a film or a product encased in a film wherein the core layer of the film has “a thickness of from about 0.05 to less than 0.10 mils” (claims 1, 27, 40, and 69) or “a continuous core layer less than 0.10 mil” (claim 65).

As stated by the examiner (id.):

the Newsome et al. reference does not specifically limit the thickness of the core layer to a particular range. Newsome et al., however, recognizes that conventional oriented films are preferably about 1.5 to 2.25 mils thick. Additionally, Newsome et al. teach that when the overall thickness of the film is 2.25, the core layer is .15 to .30 mil. Accordingly, following the teachings set forth in Newsome et al., when the overall thickness of the film is 1.5 mil, the core layer may be less than .10 mil. Therefore, it is the Examiner's position that the claimed range is embraced by the Newsome et al. reference since the range disclosed in the claims overlaps that disclosed in the reference.

Therefore, the examiner, alternatively, urges (id.):

[I]t would have been obvious and well within the purview of one of ordinary skill in the art to reduce the thickness of the core to provide a thinner, more flexible, and more economical film since Newsome et al. teaches that said properties are associated with thinner films.

Moreover, regardless of the obviousness of adjusting the thickness of the core layer, the use of the term "about", to recite the thickness of the core layer, permits some latitude in interpretation. . . . the recitation of a core layer with a thickness of .15 mil. as disclosed in Newsome et al. is embraced by the claimed core layer thickness of about .10 mil, absent a commensurate showing of criticality.

What is missing from this analysis and the conclusion based thereon is any substantive evidence which would have led one of ordinary skill in this art, at the time of the invention, from the multi-layered film described by Newsome to the multi-layered film having a core layer of

“about 0.05 to less than 0.10 mils” or “less than 0.10 mils” as presently claimed. While Newsome characterizes the corresponding core or first layer as having a preferred thickness of 0.15 to 0.30 mils for a 2.25 film (col. 9, lines 46-48), we find no explicit suggestion in the reference to use a core layer of less than 0.15 mils. Both Newsome (Abstract) and appellants (Specification, page 10) would agree that the core layer serves as the gaseous barrier layer. However, we would also agree with appellants that Newsome at least reasonably suggests a desire to avoid “reducing the effective oxygen barrier properties of the EVOH resin significantly.” (Col. 6, lines 28-32) (Reply Brief, page 17). Thus, the reduction in thickness of the core layer, proposed by the examiner, would appear to be contraindicated.

Even if we assume that the examiner is correct that (Answer, page 6) “in the packaging art, it is known to vary and adjust the thickness of the layers to optimize the desired properties, such as oxygen permeability,” it still remains that Newsome has indicated a desire to maintain an effective oxygen barrier for the core layer and a reduction in the thickness below that which was explicitly described would appear to affect the oxygen permeability in a manner which Newsome teaches as being undesirable. Even if the overall thickness of the film is reduced, Newsome would appear to suggest the need to maintain the thickness of the core layer in a range to maintain the oxygen barrier. It can not be said that Newsome suggests that the oxygen barrier characteristic can be maintained using a lower thickness for the core layer.

The examiner, alternatively, urges that the use of “about”, in defining the claimed range, permits latitude in interpreting the limitation of the thickness of the core layer and therefore that the parameters described by Newsome is encompassed by the claims. (Paper No. 11, page 7). However, there is no evidence before us which would indicate the latitude with which one skilled in this art would interpret the use of the term “about” in the present claims. As stated by our reviewing court in Modine Mfg Co. v. U.S. Int'l Trade Comm'n, 75 F.3d 1545, 1554, 37 USPQ2d 1609, 1615 (Fed. Cir. 1996):

Such broadening usages as “about” must be given reasonable scope; they must be viewed by the decisionmaker as they would be understood by persons experienced in the field of the invention. (Citation omitted). Although it is rarely feasible to attach a precise limit to “about,” the usage can usually be understood in light of the technology embodied in the invention. When the claims are applied to an accused device, it is a question of technologic fact whether the accused device meets a reasonable meaning of “about” in the particular circumstances.

Here, the examiner has provided no facts or evidence which would reasonably support a conclusion that one of ordinary skill in the art, relating to films and process of preparing films, would have regarded “about” 0.10 mils (Specification, page 16) as encompassing the lower limit of 0.15 mils of the Newsome core layer.

We do not question that it would be possible to modify the film described by Newsome to arrive at the claimed film and process of preparing the film. However, the fact that the prior art could be so modified would not have made the modification obvious unless the prior art suggested the desirability of the modification. In re Gordon, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984). Here, we find no reason stemming from the prior art which would have led a person having ordinary skill to the modify the multi-layer film of Newsome by reducing the thickness of the core layer to a value of less than the explicitly described 0.15 mils. Thus, in our opinion, the examiner has failed to establish a prima facie case of obviousness within the meaning of 35 U.S.C. § 103 of the subject matter of the claims on appeal.

On these facts, we are constrained to find that the examiner has failed to establish that it would have been obvious to those of ordinary skill in the art at the time of the invention to prepare a multilayer film having a core layer with a thickness of from about 0.05 to less than 0.10 mils comprising the blend of nylon and EVOH as presently claimed. The only source of a suggestion to so modify the film described by Newsome is appellants' own disclosure of the invention. Therefore, we must conclude that the examiner has relied on impermissible hindsight in making his determination of obviousness. In re Fritch, 972 F.2d 1260, 1266, 23 USPQ2d 1780, 1784 (Fed. Cir. 1992) ("It is impermissible to engage in hindsight reconstruction of the claimed invention, using the applicant's structure as a template and selecting elements from references to fill the gaps").

For these reasons, the examiner's rejection of the claims on appeal, is fatally defective since it does not properly account for and establish the obviousness of the claimed subject matter as a whole. Where the examiner fails to establish a prima facie case, the rejection is improper and will be overturned. In re Fine, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). Therefore the rejection of claims 1 - 6, 9 - 56, and 65 - 73 under 35 U.S.C. § 103 is reversed.

While not required for our decision in this appeal, we would note that the examiner, similarly, has not provided the substantive evidence which would reasonably have led one of ordinary skill in this art to modify the film or process described by Newsome in a manner as to arrive at a film or process which would reasonably correspond to the claim limitations such as the requirement that the "EVOH copolymer having a melting point of about 158°C or lower" (claim 1); "about 30 to less than 50% of an EVOH copolymer" (claim 27); "an EVOH copolymer having an ethylene content of at least about 48 mole percent" (claim 40); and "an EVOH copolymer having an ethylene content of about 38 mole % or higher" (claims 65 and 69), none of which are explicitly described by Newsome.

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CONCLUSION

The examiner's rejection of claims 1 - 6, 9 - 56, and 65 - 73 under 35 U.S.C.
§ 103 as obvious over Newsome is reversed.

REVERSED

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| Administrative Patent Judge |) | |
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| |) | BOARD OF PATENT |
| WILLIAM F. SMITH |) | |
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